

From the prehospital literature



From the British Paramedic Association Research and Audit Committee, edited by Malcolm Woollard

Scoop to conquer ►

▲ Krell JM, McCoy MS, Sparto PJ, *et al.* Comparison of the Ferno Scoop Stretcher with the long backboard for spinal immobilization. *Prehosp Emerg Care* 2006;10:46–51.

Over the past few years the use of a cervical collar and long backboard (LBB) has become the de facto standard of care for prehospital spinal immobilisation and the "gold standard" against which other immobilisation devices are compared. However, the acceptable amount of movement associated with spinal immobilisation on an LBB is unknown and there are risks related to patient movement during the application of the device. A recent study compared movement of the spine during immobilisation and lifting between the Ferno Scoop Stretcher Model 65-EXL (FSS) and the Ferno LBB, and also evaluated each device for comfort and sense of security. The results showed that for spinal immobilisation the FSS was as effective as, if not superior to, the LBB, and that use of the FSS reduced movement during application. Patients felt equally secure on the two devices but reported increased comfort with the FSS. The findings of the research are limited by the use of cooperative healthy, young volunteers with no prior back problems or significant arthritis, and the controlled setting. While there is a need to undertake a larger randomised study, initial findings suggest the FSS may be a suitable alternative to the LBB for spinal immobilisation.

P Gregory, British Paramedic Association Research and Audit Committee

Is this just another research study into prehospital thrombolysis? ►

▲ Cox H, Albarran JW, Quinn T, *et al.* Paramedics' perceptions of their role in providing pre-hospital thrombolytic treatment: qualitative study. *Accid Emerg Nurs* 2006;14:237–44.

Emphatically not! Efficacy of prehospital thrombolytic treatment is investigated and discussed in several empirical papers but research into paramedics' perceptions of their role in this therapy is scarce. It is heartening to see a qualitative approach being utilised to facilitate the researchers to access in-depth data gathered through careful employment of focus group interviews, on this occasion, with 20 paramedics who had not actually administered any thrombolytics at the time of the research. Although the findings were mixed, the authors identified five key emergent themes during analysis: drivers for change; duty of care; professional image; role expansion; preparedness for practice. As a small scale, exploratory study, one of its strengths is the richness of data which illuminates some of the issues about participation in such activities and provides a basis for consideration of just how far paramedics are involved in determining their continually expanding scope of practice. One message from this research, which is worthy of further investigation, is that paramedics are ready and want to be more involved in the shaping of their professional identity now and in the future, not just in relation to prehospital thrombolysis but in all aspects of their clinical practice.

J Williams, British Paramedic Association Research and Audit Committee

A French standard for managing the difficult airway ►

▲ Combes X, Jabre P, Jbeili C, *et al.* Prehospital standardization of medical airway management: incidence and risk factors of difficult airway. *Acad Emerg Med* 2006;13:828–9.

This prospective observational study based in Paris looked at factors associated with difficult prehospital airway management and the effect of applying a standard intubation protocol. Prehospital care in the French system is provided by physicians or specialist anaesthesiology nurses. The protocol for airway management includes rapid sequence intubation using a standardised pharmacological regimen and there is also a standardised two step algorithm for difficult airway. A total of 1442 patients were included. There was only a 1% deviation from standard protocol. The difficult intubation rate was low compared to other studies at 7.4% and the failure to intubate rate was 0.1%. Senior physicians and specialised nurses were equally successful at intubation, but difficult intubations were more frequent when residents were first operators, confirming previous studies that operator experience is a key factor in intubation success. Obesity, facial trauma, history of ENT neoplasia or surgery and operator position were all independent risk factors for difficult airway. The authors believe that the use of a standardised highly prescriptive protocol for intubation and the management of unanticipated difficult airway contributed to the low difficult airway incidence and failed intubation rate. This supports similar findings in operating rooms.

J Turner, British Paramedic Association Research and Audit Committee

Prehospital ALS is beneficial in cases of respiratory distress ►

▲ Steil IG, Spaite DW, Field B, *et al.* Advanced life support for out-of-hospital respiratory distress. *N Engl J Med* 2007;356:2156–64.

This study was conducted as a prospective before and after controlled trial among 8138 urban patients whose primary symptom was acute respiratory distress. In the initial phase, basic life support (BLS) ambulance staff provided oxygen, bag-valve-mask ventilation, defibrillation and, infrequently, salbutamol and sublingual glyceryl trinitrate administration. During the second phase, paramedics provided additional advanced life support (ALS) skills including intravenous furosemide and morphine, and intubation if indicated; the frequency of salbutamol and sublingual glyceryl trinitrate administration also increased. The primary outcome measure, mortality, reduced from 14.3% to 12.4% (95% confidence interval (CI) 0.4 to 3.4; $p=0.01$) from the BLS to the ALS phase (adjusted odds ratio 1.3, 95% CI 1.1 to 1.5). Additional measures included need for emergency department intubation (5.3% BLS vs 3.1% ALS; $p<0.001$); evidence of aspiration (2.1% BLS vs 1.9% ALS; $p=0.68$); admission to hospital (67.8% BLS vs 65.0% ALS; $p=0.01$); mean (SD) length of hospital stay (days) (9.8 (13.2) BLS vs 9.4 (12.2) ALS; $p=0.2$); functional status (level 1 cerebral performance score) (52.3% BLS vs 62.5% ALS; $p<0.001$) and discharge home (65.9% BLS vs 67.0% ALS; $p=0.32$). Evidence for improved outcomes following prehospital ALS, especially in the urban environment, is scant. This study is one of a few that demonstrate improved patient outcomes for prehospital ALS over BLS.

M Smyth, British Paramedic Association Research and Audit Committee